DOCUMENT RESUME

ED 040 421 CG 005 418

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TITLE Effects of Variations in the Nursery School Setting on Environmental Constraints and Children's Modes of Adaption.
INSTITUTION American Educational Research Association, Washington, D.C.; Illinois State Univ., Normal.
PUB DATE Mar 70
NOTE 48p.; Paper presented at the American Educational Research Association Convention, Minneapolis, Minnesota, March 2-6, 1970

EDRS PRICE EDRS Price MF-$0.25 HC-$2.50
DESCRIPTORS *Classroom Environment, Early Childhood Education, Nursery Schools, *Organizational Climate, *Preschool Learning, *Preschool Programs, *Social Environment

ABSTRACT

Schoggen's description of environmental force units (EFU), actions or constraints upon a child, was the focus of this study. Since those EFU's under investigation conflicted with the child's immediate intentions and desires, they are referred to as conflict EFU's. The study asks how specific characteristics of preschool settings affect the natural occurrence of environmental constraints and children's adaptations to them. A Montessori class, a University Nursery School and two Head Start classes comprised the observed settings. The classification scheme devised by Wolfson and Jackson was used to describe conflictual situations. Fourteen modes of adaption are discussed. Several variables were studied and the findings are extensively presented. The author concludes that despite the high occurrance of conflict EFU in the school environments studied, behavioral changes are effected gradually and temperately, which is in agreement with previous studies done by Fawls (1963) and Schoggen (1963). (TL)

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EFFECTS OF VARIATIONS IN THE NURSERY SCHOOL SETTING ON ENVIRONMENTAL CONSTRAINTS AND CHILDREN'S MODES OF ADAPTATION

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This study asked how specific characteristics of preschool settings affect the naturalistic occurrence of environmental constraints and children's adaptations to them. A taxonomy of seven varieties of constraints invented by Jackson and Wolfson (1968) and a taxonomy of fourteen adaptations was used. The constraints conformed to Schoggen's (1963) definition of conflict environmental force units (conflict EFU). Two middle class nursery schools and two Head Start programs were studied. These environments enabled the effects of several ecological variables--structure of the daily program, spaciousness of the school room, and teacher-children ratio--and several personal variables--age, sex, and social class--on the incidence of conflict EFU and adaptations to be determined. Differential linkages of the adaptations with varieties of conflict EFU were also examined. The environmental variable which differentiated preschool settings was the program structure, and significant effects for age, sex, and social class were also found.

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EFFECTS OF VARIATIONS IN THE NURSERY SCHOOL SETTING ON ENVIRONMENTAL CONSTRAINTS AND CHILDREN'S MODES OF ADAPTATION

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Educators would surely not dispute the fact that there are a variety of aspects of the school environment which can influence the child's life in the classroom in addition to characteristics of the pupil and his teachers, which have been the most extensively studied variables. The effect of the ecology of the school on children's behavior has been without adequate theoretical consideration or empirical support and so has had little influence upon the theory and practice of education (Barker, 1964a). The naturally occurring frustrating experiences of young children are an example of one kind of behavior which can be readily studied within the educational setting. Frustration is a frequent occurrence in the lives of all children, is a fundamental aspect of life, and is inherent in the process of socialization. The purpose of this study was to examine the influence of environmental characteristics of the school on naturally occurring frustrating experiences of young children.

Though many experimental studies have attempted to examine the impact of frustration on children's behavior, most of them have been studies in the Freudian tradition. A number of investigators have pointed out that because these studies view frustration in abnormal and deviant terms, they misrepresent the nature of its occurrence in

everyday life (Barker, 1965; Willems, 1965, 1967; Fawl, 1963). Among the authors of traditional studies are Dollard et al. (1939), who formulated a theory that frustration results in aggression, and Barker, Dembo, and Lewin (1962), who adopted the frustration-regression hypothesis. These investigators centered their work around a single type of reaction ultimately resulting from frustration, rather than a number of possible adaptation patterns; their emphasis on a single mode of response created a restricted view of the frustration phenomenon. Though other investigators in the Freudian tradition favored multiple reaction patterns to frustration (Himmelweit, 1950; Maier, 1949; Rosensweig, 1944; Stafford and Hsu, 1948), they also classified responses to frustration into categories such as aggression, regression, fixation, and repression. In this way, they emphasized a view of frustration as an interference in the goal-directed activities of the individual, leading to deviant, abnormal behavior.

The majority of studies of frustration have been carried out according to the methodological approach of experimental and laboratory psychology. The findings of studies employing this methodology are applicable only to the restricted environmental circumstances under which the data were collected, not to the variety of situations in which the child finds himself (Barker, 1964a; 1964b; 1965; 1968; Caldwell, 1968; Willems, 1965, 1967; Willems and Raush, 1969; Wright, 1960; 1967). Fawl's study (1963) on disturbances experienced by children in their natural habitats shows that outcomes predicted by laboratory studies of frustration are rare in everyday life. Because laboratory psychology overlooks the naturally occurring contexts of behavior, its

findings on the phenomenon of frustration do not generalize to milieus and behavioral settings where children actually live.

Though some investigators have endeavored to learn more about the problems encountered by young children during early school attendance through naturalistic observation (Appel, 1942; Body, 1955; Fawl, 1963; Muste and Sharpe, 1947), most of these studies have focused on fragmented aspects of the problem (Jackson and Wolfson, 1968). In these investigations, the criterion used for classifying episodes as disturbing was an experiential one; the child had to show evidence of negative affect. They did not consider the alternative behavioral criterion, mentioned but not examined by Fawl (1963), that a child who is merely blocked in his progress toward a goal may also be frustrated, even though he may be positively challenged by the barrier which the frustration presents or may unemotionally choose an alternative path toward the goal.

Inadequate consideration among various conceptions of frustration that it may give rise to responses other than those with highly negative overtones indicates a failure of these investigations to distinguish between the frustrating situation and the reaction to it. The studies of Jackson and Wolfson (1968) and Wolfson and Jackson (1969) are two investigations which have adopted a behavioral criterion of frustration by considering the frustrating event, defined as a disruption or interference in the child's natural pursuit of his desire, and the response to it as separate aspects of a single behavioral episode. In exploring the nature of these naturally occurring interruptions of desire in the nursery school environment, they identified seven varieties of frustra-

ting events; the investigation of consequent adaptations was left for future study.

The present study extends the Jackson and Wolfson research by examining frustrating situations using their definition and classification scheme, as well as a variety of naturally occurring adaptations to them. However, in this study the basic environmental unit is not called a frustrating or thwarting encounter in order to avoid terminology which implies that the necessary resultants of these events are negatively toned responses. Instead, the event is conceptualized as a special case of Schoggen's (1963) environmental force units (EFU), which are actions or constraints by the environment upon the child, directed to some specifiable end, and of which the child is aware. In this study the focus is on EFU which, if they are successful, disrupt, deflect, or redirect the child's ongoing stream of behavior. Since the EFU under investigation conflict with the child's present intentions and desires and therefore initiate subsequent attempts at dealing with these incidents of interrupted desire, using Schoggen's terminology they are called conflict environmental force units (conflict EFU).

This study further adds to the Jackson and Wolfson research by examining the incidence of conflict EFU and consequent adaptations in a variety of nursery school environments. The absence of pronounced differences among in-school and out-of-school settings in their investigations led to the speculation that environments differing in relevant characteristics had not been studied. Therefore this study was directed toward answering three main questions: (1) what are the effects of

specific characteristics of the preschool environment on the incidence of conflict EFU; (2) how do children adapt to daily encounters with conflict EFU; and (3) how are different modes of adaptation linked with varieties of conflict EFU?

METHOD

The Settings

Four nursery school settings, two composed of children from middle class backgrounds and two composed of children from lower class backgrounds, were chosen for study. In order to separate the effects of the environment from the effects of the social class composition of the school, comparisons were made between the two middle class nursery schools and between the two lower class nursery schools. The middle class environments, the Montessori School and the University Nursery School, contrasted a structured environment, where most of the time activities were pre-planned and sequenced, children were task-involved, and a direct attempt was made to teach basic intellectual and social skills, with an unstructured environment, where children were predominantly engaged in free play and where there was no formally planned curriculum.

The two lower class nursery schools were inner city Head Start programs. The daily programs of these classrooms were, for the most part, very similar. They were selected to contrast two settings which differed in size and spacial characteristics of the school room and the teacher-children ratio. The classroom of Head Start 1 was a comparatively small room 750 square feet in area which was partitioned into one large

area and three small sections used for specific activities such as block play and construction, doll and house play, and reading and games. The classroom of Head Start 2 was, in contrast to Head Start 1, a large, spacious room 1200 square feet in area with two small sections partitioned off from a large main area for particular activities. The teacher-children ratio of Head Start 1 was small, at 1/8, while that of Head Start 2 was comparatively large, at 1/6.

The Classification Schemes

Two classification schemes, one a categorization of varieties of conflict EFU, the second a taxonomy of modes of adaptation, were employed. The conflict EFU and its consequent mode of adaptation comprised the behavioral episode. The classification of conflict EFU, a scheme invented by Jackson and Wolfson (1968), is as follows:

1. Desire vs. Desire: events in which the child's pursuit of his desire is interfered with by another child.

   Example: Vickie is playing a picture matching game. Another girl holds up a card, and Vickie says, "It's mine." A third child contradicts Vickie and says, "No, its mine."

2. Desire vs. Teacher Expectation: events in which the child's actions are in some manner disrupted by the teacher's wishes.

   Example: Erick joins a group of children after leaving the clay he was playing with on the table. The teacher stops Erick and tells him that if he wants to play, he must put his clay away first.

3. Desire vs. Clutter-Crowds: events in which the child is jostled by his classmates or by adults without any apparent intention to disrupt his activity.

Example: A group of children are crowding around a table. Roberto wants to get his papers from the table, but he is pushed back because of the crowd.

4. Desire vs. Institutional Restriction: events in which the child's activity is disrupted by the teacher, not because of her personal beliefs about what should be going on, but because of the institutional demands of the school.

Example: Michelle tells the teacher, "I want to draw some more." The teacher says to her that she can't because its time to go home.

5. Desire vs. Inability: events in which the child's desire to do something is frustrated by his lack of ability.

Example: Karen is sitting on the floor struggling with her snow pants, but she is not able to get them on.

6. Desire vs. Teacher Overlook: events in which the teacher does not respond to the child's request for help or attention.

Example: Lisa tries to show her Indian hat to the teacher. The teacher is attending to some other children and does not hear her.

7. Desire vs. Environmental Limitation: events in which the child expresses a desire for something that is not available.

Example: Erick wants a piece of carrot to peel like another girl at the table. The teacher tells Erick that he cannot have it because there are no more carrots at school today.

8. Other: events which could not be classified into any of the above categories.

The classification of modes of response was constructed through an examination of observations and of records of episodes as they occurred in a nursery school environment. Four broad classes of adaptations

were developed, under which were grouped fourteen more specific response categories, as follows:

I. Unresponsive-Withdrawing

1. Unresponsive: not responding overtly to a conflict EFU; continuing uninterruptedly with an activity.

Example: Erick is building with blocks in the corner of the room. The teacher asks Erick to go and get a group of children, then to sit down at the table with them for a group game.
Erick ignores the teacher and continues working on his block arrangement.

2. Withdrawing: retreating out of the field or relinquishing an activity, but unprecipitated by any direct admonition from another child or adult.

Example: Brian is moving his train engine down the track and runs into another boy who is moving his train in the opposite direction.
Brian picks up his engine and goes to a part of the track which is not being used by other children.

II. Dependent-Compliant

3. Whining, Crying

Example: Maria is painting at the easle, and a boy approaches her and with his brush puts paint on her paper.
Maria begins to cry and says, "He wrecked my picture; he wrecked my picture."

4. Complying: responding obediently to commands, prohibitions, and threats from others.

Example: Joseph climbs on a rocking horse. A boy who has just gotten off the rocking horse says to Joseph, "No, that's mine. You find another one."
Joseph gets off the rocking horse and goes to a different one.

5. Seeking assistance: soliciting the help or protection of an adult or another child.

Example: Lillie is trying to put her coat on, but she cannot reach around in back to get her hand in the second sleeve.
Lillie goes to the teacher for help.

III. Thoughtful-Persistent

6. Making Recompense: offering atonement or compensation to another child or adult.

Example: Darrell grabs another boy's cracker jack prize. It is recovered from him by the other boy.
Then Darrell goes over to the other boy and says, "I'm sorry, I'm sorry," and offers the boy his own prize, too.

7. Questioning: inquiring for an explanation for the behavior of another child or adult.

Example: Karen and another girl are playing together at the water pan, and the other girl takes a towel and starts to leave the water pan, leaving Karen to play by herself.
Karen yells after the girl, "What are you going away for? Why are you leaving?"

8. Explaining: offering a rationale for one's desire or behavior.

Example: John is playing house with a girl, and he tells her that he is turning on the faucet to wash the dishes. The girl says, "No, you can't. I'm the mother. I'll wash the dishes."
John responds, "Fathers wash dishes sometimes, too."

9. Persisting: entreating, urging, or repeatedly soliciting from another child or adult, engaging in search for an object that is not there, or attempting to perform an activity beyond one's ability.

Example: Jamie is pasting some papers together, and when he squeezes the glue bottle, nothing comes out.
He knocks the bottle against the table, then sticks a pin in the hole, then talks to the glue bottle, saying, "Come out," while he tries again.

IV. Offensive-Combative

10. Threatening: warning, defying, or in some manner affronting another child or adult.

Example: Stephen and another boy are painting at the table, and each has a milk carton of paint. The other boy says to Stephen, "I'll put a handful of stones in your paint."
Then Stephen answers, "Then I'll put a handful of stones in your paint."

11. Refusing: rejecting or negating the desire of another child or adult.

Example: James is pouring water into the sink, and a girl holds out a cup to him, saying, "You pour water in there, you pour it in there."
James says, "No," firmly.

12. Commanding: ordering, directing, or instructing another child or adult.

Example: Some boys bring their toys onto the ledge where Roberto is playing with his car, and they get in his way.
Roberto says, "Move, move."

13. Pursuing: chasing after another in retaliation or in an attempt to retrieve some object.

Example: Sarah is playing with some rocks, and a boy comes over, grabs two of them, and begins to run with them.
Sarah starts to chase after the boy, yelling, "Gimme them, gimme them."

14. Physically Attacking: deliberately pushing, running up against, or in some manner attempting to assault another child or adult.

Example: A boy running past knocks Anne's block tower down.
Anne runs over and hits the boy.

V. Other: responses which could not be classified into any of the above categories.

Subjects

Seventy-two children, ranging in age from 2 years 8 months to 5 years 6 months, participated in the study. In the University Nursery School classroom there were 18 children, in the Montessori classroom there were 19 children, in Head Start 1, 16 children, and in Head Start 2, 19 children. All were Caucasian, except for two Negro children, one in each of the Head Starts, and three Oriental children in the University Nursery School.

Procedure

Data were collected in the fall season of the year and took approximately seven weeks to be completed. Data collection took place first in Head Start 1, then in the Montessori School, then in Head Start 2, and finally in the University Nursery School. The order in which the schools were taken depended on the opening dates of the school year. The earlier a school opened, the sooner observations were made there, in an attempt to make as comparable as possible the amount of time children of different schools had already spent in the classroom when data collection occurred.

Five observers participated in the present study. Each observed in all of the four schools. Observers were provided with a list of the names of children in the particular class to be observed, beside which were spaces for noting down the conflict EFU and adaptations as they happened. The appropriate set of observation sheets was attached to a clip board prior to each observation, and the observer was provided with a stop watch in order to time the observation of each child.

A method of short time samples was used, each child being observed for two minutes during an observation period. All observations were made during the morning sessions of the schools, each period requiring about an hour's time, so that there were three observation periods per day. Each child was observed for a total of 42 minutes, that is, 21 times, so that it took about 7 days to complete the observations in one school. In order to control for the effects of observer bias, the observations were arranged so that each observer made three observations per week, one early-morning, one mid-morning, and one late-morning, and each of the three observations was scheduled for a different day of the week.

The observer recorded a description of behavioral episode as it happened. All coding took place separately from the observations so as to avoid the unreliability which would occur if an observer had to remember and deal directly with such a large number of categories of EFU and adaptations. Immediately following each observation period, using a dictaphone the observer recorded a fuller description of the EFU and adaptations. These dictations were transcribed by a typist and used as the actual data to be coded. Two coders coded the trans-

cribed descriptions of the conflict EFU and adaptations. When the coding of an EFU or adaptation was in question, the two coders discussed the problem, and a joint decision was reached.

Reliabilities

Two inter-observer reliability checks were arranged during the seven weeks of data collection, one at the beginning during the first week and one at the end during the sixth week in order to find out whether an acceptable level of reliability was maintained throughout the time period. For both checks, each observer was twice paired with a second observer and scheduled to go into the classroom to observe with him simultaneously for one observation period. Each reliability check, therefore, consisted of five pairs of observations which were examined for the extent to which (1) episodes were observed in the environment and not overlooked and (2) the extent to which independent descriptions of the same episodes were coded in the same way.

A comparison of the descriptive content of episodes recorded by members of observer pairs revealed the extent to which episodes as they occurred in the environment were observed rather than overlooked by the observers. Observer agreement figures are shown in Table 1. The fraction of episodes observed is calculated for each observer by dividing the number of episodes which he and his partner both see by the total number of episodes his partner sees (which includes episodes seen in common plus episodes observed only by the partner). The resulting figure is an estimate of the percentage of total number of episodes

occurring which are seen by the observer. An estimate of the percentage of episodes overlooked by the observer can be calculated by subtracting the percentage seen from 100.0. Averaging the percentage of episodes seen by each observer yields an overall estimate of 71.20 for the first reliability check and 74.59 for the second reliability check. Subtracting these figures from 100.0 shows that on the average, observers overlooked from about 25 to 29 per cent of the total number of episodes which occurred during the data collection process.

Considering only those episodes which were observed by both members of an observer pair, Table 2 shows the percentage of independently recorded EFU and adaptations which were identically coded for each pair of observers. Overall estimates obtained by averaging the figures for each pair reveals percentages of agreement for EFU at 96.39 for the first reliability check and 95.68 for the second reliability check. The extent to which adaptations recorded by two observers were coded in the same way is somewhat less consistent. The average percentage of agreement is 90.93 for the first reliability check and 76.95 for the second check.

Inter-coder reliabilities were determined by having two trained coders independently code the descriptions of 51 EFU and their 53 adaptations. Percentage of agreement for the coding of EFU is 94.10. For the coding of adaptations, it is somewhat less, at 88.70.

Data Analysis

The effects of school environment, sex, age, and socio-economic status on EFU and adaptations experienced by the child were tested by computing frequencies and percentages of occurrence of EFU, percentages

of adaptation categories, and percentage of verbal responses for each individual child. These within-subject scores were entered as dependent variables into several three-way analyses of variance. On a particular contrast, significant findings for both frequency and percentage of EFU, rather than significance on only one of them, provides some additional confidence in the results. Since the raw frequency of occurrence of adaptations was highly dependent on the frequency of EFU, only percentage values were analyzed for the response categories.

The first factor in the analyses of variance, school, consisted of three contrasts: (1) the Montessori School (structured program) versus the University Laboratory School (unstructured program); (2) Head Start 1 (restricted classroom and small teacher-children ratio) versus Head Start 2 (spacious classroom and large teacher-children ratio); and (3) the Montessori and University Nursery Schools combined (high socio-economic status) versus the two Head Starts combined (low socio-economic status). The second and third factors were age (3 levels) and sex (2 levels). The age distribution was trichotomized by dividing it into three levels of approximately equal age range: young, 32 months to 43 months; middle, 44 months to 54 months; and old, 55 months to 66 months. The analyses of variance tested for a linear trend in the data across the three age levels.

An additional question asked whether children who encountered a high number of conflict EFU differed from those who experienced very few of them in the varieties of EFU they experienced and in their adaptive responses. The 72 children were arranged in order from those who encoun-

tered fewest EFU to those who encountered the greatest number of them and the sample then partitioned into 6 consecutive groups of 12 children each. Each group represented a level of EFU frequency, ranging from low to high. A one-way analysis of variance with six levels of EFU frequency was performed with within-subject percentage distributions of EFU and adaptations as dependent variables.

HYPOTHESES

Impact of the Environment on Conflict EFU and Adaptations

The structured Montessori School, in which activities were to a large extent pre-arranged and sequenced, was expected to maximize the occurrence of desire vs. teacher expectation and desire vs. institutional restriction EFU which involve the child's encounter with authority. Since the unstructured University Nursery School allows children free reign to select and control their own activities and therefore offers opportunities for a greater frequency of interaction among individual children, it was anticipated to minimize authority EFU and to maximize desire vs. desire and desire vs. clutter crowds which occur between child and child. In addition, it was hypothesized that in the Montessori School, EFU involving the child's inability to perform an activity would increase. In the free environment characteristic of the University Nursery School, it was thought that the child would have more opportunities to perform tasks in his own individualistic way so that frequent interruption of desire because of lack of ability would be avoided.

The size and spacial arrangements of the school room in relation to the number of children attending class and the teacher-children ratio were two additional environmental variables examined. The spacious room

with few partitions of Head Start 2 was anticipated to reduce the incidence of desire vs. clutter crowds which involve accidental crowding and jostling among children. The teacher-children ratio was hypothesized to influence the extent to which children's desires went unanswered in the classroom. Head Start 1 with a relatively small teacher-children ratio was anticipated to evidence a comparatively large number of desire vs. teacher overlook EFU.

The impact of the environment on modes of response was hypothesized to be an indirect one. Particular kinds of responses were presumed to be elicited more frequently by some categories of EFU than others. It was hypothesized that the range of adaptations associated with a particular kind of EFU would depend on the extent to which EFU, even though they fell under the same category, were nevertheless in some ways qualitatively different. For example, encounters between child and child can occur under a wide variety of circumstances and conditions, whereas those occurring between child and teacher or between child and institutional demands always involve him with an authority figure, whom he most often views in a position of strength and power, regardless of the immediate circumstances. Therefore it was expected that those EFU involving an interruption of desire by an adult would initiate responses which were predominantly compliant. To the extent that an environment emphasized a particular kind of conflict-EFU, it was expected to encourage the occurrence of adaptations which were linked with that kind of EFU.

Relationship of Age, Sex, and Social Class to Conflict EFU and Adaptations

It was anticipated that older children would exhibit a greater

number of adaptations of the thoughtful-persistent variety than younger children because of their increased verbal ability and maturity of thought processes. Girls were expected to exhibit a greater number of adaptations of the dependent-compliant type, boys a greater number of the offensive-combative kind, due to the nature of culturally encouraged sex roles.

The empirical findings on social class differences in verbal ability are contradictory, and hypotheses made with respect to differences in verbalizations between lower class and middle class children must therefore be based upon selected evidence. On the basis of findings by Bernstein (1959), McCarthy (1943), and Riessman (1962) who show that language usage is more limited among lower class children, in this study lower class children were expected to be less verbal in their responses and to exhibit fewer adaptations of the thoughtful-persistent variety. In addition, it was hypothesized that lower class children would be more offensive-combative in their adaptations. McKee and Leader (1955) report that aggression among three- and four-year-olds is more common among lower class children. Davie (1953) speaks of the social approval of aggression in lower class society.

RESULTS

In general, the findings of this study confirm those of the Jackson and Wolfson research in demonstrating that conflict EFU are a surprisingly frequent occurrence in the lives of young children. In all four schools, a total of 1728 EFU were recorded during 3024 total minutes of observation. Dividing the total number of EFU (1728) by 3024 shows that slightly more

than one EFU occurred every two minutes when individual differences are disregarded. There were, on the average, a total of 102 EFU occurring during each three-hour morning.

Both the total distribution of conflict-EFU and the individual distributions for each of the four schools shown in Table 3 indicate that desire vs. desire and desire vs. teacher expectation were the most commonly occurring varieties of conflict EFU. Together they accounted for 60 per cent or more of the EFU children encountered in the nursery school. Desire vs. teacher expectation fluctuated markedly, from a low 21.43 per cent in the University Nursery School to a high of 50.88 per cent in the Montessori School. Rating third in frequency of occurrence were desire vs. inability EFU, although their incidence varies from a low of 10.92 cent in the Montessori School to a high of 23.90 per cent in the University Nursery School. No desire vs. environmental limitation EFU occurred in this study.

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Insert Table 3 about here

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The total distribution and four within-school distributions of the fourteen adaptations depicted in Table 4 show that unresponsiveness and complying are the two most frequently occurring categories of response to EFU. From 42.6 per cent of the time in the University Nursery School where least so to 60.5 per cent of the time in the Montessori School where most so, children respond to conflict EFU in these two nonresistant, unemotional, and unstirred ways. Rating third in frequency of occurrence

in all four schools is the persistent category. Ranging from a low of 11.2 per cent in the Montessori School to a high of 20.4 per cent in the University Laboratory School, steadfast perseverence after his own desires shows itself as one of the typical adaptations to EFU of the nursery school child. Only 3 per cent of the adaptations of these young children fall into the reflective categories of making recompense, explaining, and questioning. Responses of crying, threatening, and physically attacking, outcomes which are predicted by frustration-regression and frustration-aggression theory, are also very low in frequency. Overall, they account for only 5.4 per cent of the responses and are not higher than 5.7 per cent in any school, a finding which agrees with Fawl's (1963) general conclusion that blocked goals usually fail to produce these states of great disturbance on the part of children.

Impact of the Environment on Conflict EFU and Adaptations

The single environmental variable of those considered in this study which differentiated one nursery school from another was the structure of the nursery school program. The expectation that the Montessori environment would be higher than the University Nursery School in encounters between child and teacher and child and the institutional demands of the school was not confirmed for desire vs. institutional restriction. However, a dramatic difference in the expected direction between the two schools in desire vs. teacher expectation for both frequency and percentage of occurrence was found ($F = 50.12$, $p < .0001$ and $F = 42.99$, $p < .0001$, respectively).

The expectation that the University Nursery School would be higher than the Montessori School in the incidence of desire vs. desire and desire vs. clutter crowds was not confirmed for frequency of occurrence, but was confirmed on both varieties of constraint for percentage of occurrence ($F = 4.68$, $p. < .03$ and $F = 9.39$, $p < .003$, respectively).

The Montessori School was anticipated to be higher than the University Nursery School in the incidence of desire vs. inability EFU. This hypothesis was not substantiated. Instead, the reverse effect was found. The University Laboratory School evidenced both a greater frequency ($F = 7.25$, $p < .009$) and a greater percentage ($F = 16.83$, $p < .0002$) of inability EFU than did the Montessori environment. The free environment characteristic of the unstructured nursery school did not prevent, but rather augmented the child's encounter with his own inability to perform tasks and activities.

Only one additional significant finding appeared along with those confirming or disproving the hypotheses examining the effects of structure of the daily program. Children in the Montessori School encountered a greater total frequency of EFU than did children in the University Laboratory School ($F = 6.27$, $p < .01$). An examination of the gross frequency distributions in Table 3 suggests that this difference is primarily due to the unusually high incidence of desire vs. teacher expectation in the Montessori setting.

The results of the contrasts between the two Head Starts which examined the effects of spacial characteristics of the school room and teacher-children ratio showed no differences in the incidence of conflict

EFU due to these two environmental variables.

Table 5 examines the extent to which varieties of conflict-EFU differed from one another in the diversity of adaptations they elicited by presenting frequency and percentage distributions of adaptations for each kind of conflict EFU. As predicted, desire vs. desire EFU, involving intrusions by other children into the target child's personal life space, evoked the broadest range of adaptations of any EFU. Eight adaptation categories exhibited a response rate of 5 per cent or more of the total number of adaptations to desire vs. desire. With the exception of the "other" EFU category, none of the remaining varieties of EFU exhibited a response rate of at least 5 per cent in more than four response categories. The results indicate that except for desire vs. desire, the EFU were quite restrictive in the adaptations which they elicited. When interruptions of children's ongoing behavior were made by teachers, either because of their personal desires or because of formal institutional demands, the modal response was compliance. In addition, when children did not adapt obediently to encounters with adults in the classroom, they tended to ignore the demands which were made of them. Desire vs. inability and desire vs. teacher overlook, EFUs which were unique in that they did not involve intrusions by others, but instead were concerned with encounters by the child with his own personal limitations in effecting the environment in a desired way, resulted in a high rate of persistence as an adaptation.

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Insert Table 5 about here

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This study anticipated that a nursery school environment would encourage particular kinds of adaptations to the extent that it promoted the occurrence of conflict-EFUs linked with those adaptations. Contrasts on adaptations between the Montessori and the University Nursery School reveal that the Montessori School exhibited a strikingly higher percentage of adaptations in the compliant category than did the University Nursery School ($F = 43.17$, $p < .0001$), a response linked with the unusually high incidence of desire vs. teacher expectation in the Montessori School. The University Nursery School was higher than the Montessori School in persisting ($F = 7.46$, $p < .008$), a response linked with the high incidence of desire vs. inability, and in unresponsiveness ($F = 19.46$, $p < .01$), a response linked with desire vs. desire and desire vs. clutter crowds. When the broad adaptation categories were considered (see Table 6), the Montessori School exceeded the University Laboratory School in dependence-compliance ($F = 34.16$, $p < .0001$). The University Nursery School exceeded the Montessori School in both unresponsive-withdrawing ($F = 7.20$, $p < .009$) and thoughtful-persistent adaptations ($F = 7.77$, $p < .007$). An additional difference between the two schools occurred in the incidence of adaptations which were verbal in character. The University Nursery School encouraged verbal adaptations to a greater extent than did the Montessori School ($F = 7.39$, $p < .009$).

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Insert Table 6 about here

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Relationship of Age, Sex, and Social Class
to Conflict EFU and Adaptations

The age contrast findings shown in Table 7 indicate that older children experienced a significantly greater frequency of desire vs. desire EFU than did younger children ($F = 4.51$, $p < .03$). Older children were higher than younger children in both frequency and percentage of desire vs. teacher expectation ($F = 12.89$, $p < .0007$ and $F = 3.76$, $p < .05$, respectively) and in the total number of EFU they met ($F = 13.84$, $p < .0005$). A marginally significant difference on desire vs. inability was found. Younger children encountered a greater percentage of this EFU than did older children.

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Insert Table 7 about here

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The hypothesis that older children would exhibit a greater number of adaptations falling into the thoughtful-persistent category was not confirmed. However, a number of other age differences did occur. Table 8 shows that the older the child, the less unresponsive he was ($F = 14.44$, $p < .0004$), the more he tended to adapt with refusals ($F = 4.60$, $p < .03$), and the more verbal he was in his adaptations ($F = 7.38$, $p < .0009$). On the broad adaptation categories, younger children were more unresponsive-withdrawing ($F = 13.36$, $p < .0006$), and older children were more offensive-combative ($F = 4.65$, $p < .03$).

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Insert Table 8 about here

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Several differences appeared in the incidence of EFU and adaptations between boys and girls. Boys were higher than girls in both frequency and percentage of desire vs. teacher expectation ($F = 12.23$, $p < .001$ and $F = 5.50$, $p < .02$). They also encountered a greater number of events in general than did girls ($F = 8.36$, $p < .05$). The hypothesis that girls would be more dependent-compliant in their adaptations than boys was not confirmed, and instead, the boys, who were disproportionately high in their encounters with desire vs. teacher expectation, exhibited a significantly greater percentage of adaptations in the compliant category than did girls ($F = 10.82$, $p < .001$). Contrary to expectations, boys were not more offensive-combative than girls.

No social class differences appeared in the incidence of EFU in this study. Two social class differences in percentages of adaptations were found, and both were in expected directions. Middle class children used explanations more frequently than did lower class children ($F = 7.25$, $p < .001$), and lower class children adapted with physical attacks more frequently than did middle class children ($F = 5.36$, $p < .02$). However, no differences appeared between the two groups on the broad adaptation categories. Contrary to expectations, there was no social class difference in the percentage of verbal adaptations, although the means were in the expected direction ($F = 2.60$, n.s.).

Contrasts Between High-EFU and Low-EFU Children

Analyses which examined the differences in percentages of EFU and adaptations between children who encountered a high frequency of EFU and

those who met very few indicate (see Table 9) that high-EFU children showed a marginally significant tendency to experience a greater proportion of desire vs. teacher expectation EFU than did low EFU children ($F = 3.64$, $p < .06$), whereas low-EFU children met with a greater proportion of desire vs. inability EFU than did high-EFU children ($F = 7.91$, $p < .006$). When their adaptations were considered, the low-EFU child appeared either unstirred or perseverent in the face of frustration as compared with the high-EFU child, who was more belligerent and reactive. As Table 10 shows, children who experienced few EFU were significantly more unresponsive ($F = 9.30$, $p < .003$) and more persistent ($F = 5.52$, $p < .03$) in their adaptations than those who experienced a large number of EFU. High-EFU children used physically attacking as an adaptation significantly more frequently than did low-EFU children ($F = 7.28$, $p < .009$). On the broad adaptation categories, low-EFU children were more unresponsive-withdrawing ($F = 6.81$, $p < .01$), and high-EFU children were more offensive-combative ($F = 11.56$, $p < .001$).

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Insert Table 9 about here

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Insert Table 10 about here

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Intercorrelations Among the Adaptations

Intercorrelations among the within-subject percentages of the fourteen response categories were computed in order to determine whether

grouping of responses into the four broad adaptation categories was not only theoretically, but also empirically warranted. The total sample intercorrelation matrix is shown in Table 11. In general, adaptations within the four broad categories were not found to be positively or negatively correlated. Only one significant correlation in the expected direction occurred (for threatening and physically attacking, $r = .25$, $p < .05$). Nine other significant correlations were found among the fourteen responses. All of them were across the broad adaptation categories, and seven of them were negative. The results of the correlation analysis neither confirm nor deny the validity of the broad adaptation groupings. Five of the adaptation categories (unresponsive, explaining, persisting, commanding, and pursuing) showed a significant negative correlation with complying, indicating that children who frequently obey EFU are not unresponsive and do not persist, command, or retaliate in the face of EFU.

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Insert Table 11 about here

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DISCUSSION

The single environmental characteristic of importance in affecting the incidence of EFU and adaptations in the nursery school was the structure of the nursery school day. The most dramatic finding, the exceedingly high incidence of desire vs. teacher expectation in the Montessori as compared with the University Laboratory School, is attributed to the great necessity for order and routine to be established by the teacher of the structured school for the tasks of her school day to take place smoothly and efficiently.

In the University Nursery School, there was little emphasis on the routine aspects of nursery school life, and the rituals of washing and toileting, of putting away toys and partaking of mid-morning juice were flexible and adaptable. In many such situations, only a minimum of conformity was expected. In contrast, the Montessori method fostered a prepared environment with highly structured materials and equally ritualized expectations for their use. Whereas in the University Nursery School, materials could be manipulated in any way the child desired, in the Montessori School it was necessary for the teacher to intervene in the child's activity to demonstrate proper use of materials and to interrupt him when she saw that the equipment was not being used correctly. The Montessori method specified a particular curriculum which promised early learning of cognitive and social skills. The teacher's frequent interruption of the spontaneous desires of the child was a prerequisite to attaining the educational goals of the school. A child who was to achieve success in the Montessori School was an adaptively compliant child, since there were many rules and strictures placed upon him, and his progress depended on his conformity to these rules.

The orderly arrangement of the Montessori School also affected the extent to which there were opportunities for the occurrence of conflicts between child and child in the classroom. The majority of the time, the Montessori children were engaged in group activities conducted by the teacher or in sedentary, solitary tasks which demanded concentration for mastering the strict rules pertaining to use of materials. Social interchange among the children, although it did occur, was not encouraged as it

was in the University Nursery School, and no provisions were made for dramatic and fantasy play. This differential emphasis in the two schools on social interaction and physical activity may well be responsible for the greater proportion of desire vs. desire, desire vs. clutter crowds, and verbal adaptive strategies which occurred in the University Nursery School.

Contrary to expectations, the University Nursery School was higher than the Montessori School in the incidence of desire vs. inability EFU. The original hypothesis of this study overlooked the fact that the Montessori equipment was designed to be used in a graded, step-wise fashion and was logically devised to instruct without error. In addition, the Montessori teacher presented materials gradually to the child as she noted his level of readiness and ability. She did not allow him to use materials which she decided were too difficult for him. In contrast, the University Nursery School child frequently engaged himself in activities which did not have this graded character to them and which were not selected to match his level of ability. The Montessori environment was designed to prevent the frustration of failure and to emphasize successful achievement. In retrospect, the finding on desire vs. inability suggests that one of the Montessori School's goals was being realized in terms of behavioral process.

In general, the differences found between the two nursery schools substantiate Barker's (1965) notion that environmental inputs to individuals, in this case conflict EFU which lead to behavioral consequences, are themselves embedded in environments, or behavioral settings, and that these settings interact with and regulate the inputs in accordance with

the requirements of the environment. The results of this study illustrate both sides of the coupling of environmental and behavioral phenomena: (1) the relationship of characteristics of the environment to critical inputs and (2) the relationship of critical inputs to behavioral responses.

Several individual characteristics of children join with the environment in shaping the configurations of the EFU and adaptations. The fact that older children were more aggressive than younger children in their adaptations is in agreement with a number of previous investigations (Bridges, 1931; Isaacs, 1937). This change on the part of the older preschool child to more assertive and better directed forms of expression may have made him more visible to teachers in the classroom so that they were likely to make more demands of him and to interrupt his desires more frequently. The fact that older children exhibited fewer desire vs. inability constraints may be the result of the rapid physical and intellectual development which takes place from two to five and enables the older preschooler to evidence greater mastery over his environment so that tasks which he attempts are less fraught with struggle and difficulty.

The fact that boys received a greater number of EFU emanating from teachers than girls is in agreement with numerous studies of teachers' personal involvement and contacts with pupils (Jackson and Lahaderne, 1967; Jackson, Silberman, and Wolfson, 1969; Lippitt and Gold, 1959; Meyer and Thompson, 1963). Though boys in this study did not show themselves to be higher in offensive-combative adaptations than girls, they did encounter a greater total number of EFU which may be indicative of a higher activity level and more vigorous play on their part in the classroom. This masculine

behavior could have resulted in boys receiving a greater number of teacher-initiated EFU, which led to a high incidence of compliance as an adaptation on the part of boys as compared with girls.

In agreement with Schoggen's (1963) findings, a wide range of individual differences appeared in the number of conflict EFU encountered by children, some meeting as few as 10 and others as many as 40 or more in 42 minutes of observation. The manner in which high-EFU children differed from low-EFU children supports Schoggen's suggestion that there may be fundamental personality differences between these two groups of children. The high level of desire vs. inability which low-EFU children encountered indicates that they may have preferred to explore and interact with material objects and to engage in solitary and sedentary tasks rather than to interact with other children in the classroom. High-EFU children, as indicated by the forceful and intense means they used to cope with interruptions of desire, were, in all likelihood, more vigorous, energetic, impulsive and lively in their personal dispositions than low-EFU children. These personal characteristics of high-EFU pupils probably made them more visible in the classroom, more of a threat to classroom order, and therefore more vulnerable to desire vs. teacher expectation EFU.

Despite the high frequency of occurrence of conflict-EFU in the school environments studied, these four settings seemed to go about the task of effecting changes in the behaviors of their children gradually and temperately, a finding which is in agreement with the results of Fawl's study (1963) of naturally occurring disturbances experienced by young children and Schoggen's (1963) examination of conflict EFU. Almost entirely

absent in the observation protocols of this investigation were EFU involving physical contacts and threats of punishment, and strong pressures counter to the child's will were rare. The moderate nature of frustration in these schools may have been responsible for the fact that approximately 50 per cent of the time, children were either passively compliant or unresponsive in the face of them. The high rate of compliance as a response to conflict EFU is in agreement with Barker's (1965) conclusion that the end result of social inputs from others is frequently a conforming response.

Finally, the results of this investigation should not be assumed to generalize to nursery school environments other than the four schools which were studied. Instead, the specific findings point up the uniqueness of the preschools under investigation and cannot be taken as representative of other nursery school settings which have their own special character and unique style of classroom life.

FOOTNOTES

[1]This study was carried out at the University of Chicago under a contract with the Early Education Research Center, U. S. Office of Education. The author wishes to express her appreciation to Philip W. Jackson, John C. Glidewell, Susan S. Stodolsky, and David E. Wiley for their helpful suggestions throughout the various stages of this study, and to Kenneth N. Berk for his assistance with the statistical analyses. Sharon Fine, Ann Kaplan, Kevin MacMillan, and Barbara Shiffer assisted with the data collection, and without their conscientious work this study would not have been possible.

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TABLE 1

AGREEMENT IN OBSERVATION OF EPISODES

Observer Pairings	No. Seen by both Pair Members	Total No. Seen by 1st Pair Member	Percentage of Agreement	Total No. Seen by 2nd Pair Member	Percentage of Agreement
First Inter-Observer Reliability Check					
1 and 4	8	11	72.73	11	72.73
2 and 3	15	20	75.00	20	75.00
3 and 4	4	6	66.67	6	66.67
1 and 5	11	14	78.57	14	78.57
2 and 5	8	11	72.73	15	53.33
Second Inter-Observer Reliability Check					
1 and 4	13	18	72.22	18	72.22
2 and 3	5	8	62.50	9	55.55
3 and 4	14	17	82.35	19	73.68
1 and 5	16	21	76.19	21	76.19
2 and 5	14	16	87.50	16	87.50

TABLE 2

AGREEMENT IN CODING OF INDEPENDENTLY RECORDED
CONFLICT EFU AND ADAPTATIONS

Observer Pairings	No. EFU Identically Coded	Total No. EFU Seen by Both Pair Members	Percentage of Agreement	No. Adaptations Identically Coded	Total No. Adaptations Seen by Both Pair Members	Percentage of Agreement
First Inter-Observer Reliability Check						
1 and 4	7	8	87.50	7	7	100.00
2 and 3	15	15	100.00	14	16	87.50
3 and 4	4	4	100.00	5	5	100.00
1 and 5	11	11	100.00	8	11	72.73
2 and 5	17	18	94.44	17	18	94.44
Second Inter-Observer Reliability Check						
1 and 4	12	13	92.31	11	13	84.61
2 and 3	5	5	100.00	3	5	60.00
3 and 4	4	4	100.00	13	14	92.86
1 and 5	11	12	91.66	11	16	68.75
2 and 5	17	18	94.44	11	14	78.57

TABLE 3

TOTAL DISTRIBUTION OF CONFLICT EFU AND DISTRIBUTION FOR EACH OF THE FOUR SCHOOLS

Conflict EFU	All Schools N=72		University Nursery School N=18		Montessori School N=19		Head Start 1 N=16		Head Start 2 N=19	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Desire vs. desire	560	32.4	137	37.64	137	26.71	146	37.44	140	30.37
Desire vs. teacher expectation	627	36.3	78	21.43	261	50.88	146	37.44	142	30.80
Desire vs. clutter crowds	180	10.4	46	12.64	32	6.24	34	8.72	68	14.75
Desire vs. institutional restriction	25	1.4	4	1.10	13	2.53	1	.26	7	1.52
Desire vs. inability	255	14.8	87	23.90	56	10.92	47	12.05	65	14.10
Desire vs. teacher overlook	66	3.8	8	2.20	14	2.73	13	3.33	31	6.72
Desire vs. environmental limitation	0	....	0	.....	0	.....	0	.....	0	.....
Other	15	.9	4	1.10	0	.....	3	.77	8	1.74
Total	1,728	100.0	364	100.0	513	100.0	390	100.0	461	100.0

TABLE 4

TOTAL DISTRIBUTION OF ADAPTATIONS AND DISTRIBUTION FOR EACH OF THE FOUR SCHOOLS

Adaptation	All Schools N=72		University Nursery School N=18		Montessori School N=19		Head Start 1 N=16		Head Start 2 N=19	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Unresponsive	410	22.3	103	26.3	103	18.7	101	24.2	103	21.6
Withdrawing	90	4.9	23	5.9	29	5.3	16	3.8	22	4.6
Crying	9	0.5	1	0.3	2	0.4	4	1.0	2	0.4
Complying	553	30.1	64	16.3	231	41.8	118	28.2	140	29.4
Seeking assistance	64	3.5	16	4.1	18	3.3	5	1.2	25	5.2
Making recompense	2	0.1	1	0.3	0	....	1	0.2	0	....
Questioning	4	0.2	1	0.3	2	0.4	0	....	1	0.2
Explaining	50	2.7	20	5.1	15	2.7	6	1.4	9	1.9
Persisting	281	15.3	80	20.4	62	11.2	57	13.6	82	17.2
Threatening	14	0.8	2	0.5	5	0.9	4	1.0	3	0.6
Refusing	152	8.3	35	8.9	34	6.2	48	11.5	35	7.3
Commanding	73	4.0	20	5.1	21	3.8	19	4.5	13	2.7
Pursuing	23	1.3	8	2.0	5	0.9	4	1.0	6	1.3
Physically attacking	75	4.1	9	2.3	16	2.9	23	5.5	27	5.7
Other	39	2.1	9	2.3	9	1.6	12	2.9	9	1.9
Total	1,839	100.0	392	100.0	552	100.0	418	100.0	477	100.0

TABLE 5

FREQUENCY AND PERCENTAGE DISTRIBUTION OF ADAPTATIONS BY VARIETY OF CONFLICT EFU

Adaptation		EFU: Desire vs Desire	Desire vs Teacher Expectation	Desire vs Clutter Crowds	Desire vs Institutional Recreation	Desire vs In-ability	Desire vs Teacher Overlook	Other	Total
Unresponsive	f.	125	109	131	6	25	12	2	410
	%	20.12	16.59	70.81	24.00	9.36	17.39	13.33	22.29
Withdrawing	f.	43	5	13	1	20	6	2	90
	%	6.92	0.76	7.02	4.00	7.49	8.69	13.33	4.89
Crying	f.	4	4	....	....	....	....	1	9
	%	0.64	0.60	....	....	....	....	6.66	0.48
Complying	f.	61	474	1	17	....	....	....	553
	%	9.82	72.14	0.54	68.00	....	....	....	30.07
Seeking Assistance	f.	18	1	....	....	45	....	....	64
	%	2.89	0.15	....	....	16.85	....	....	3.48
Making Recompense	f	1	....	1	....	....	....	....	2
	%	0.16	....	0.54	....	....	....	....	0.10
Questioning	f.	2	1	....	....	....	1	....	4
	%	0.32	0.15	....	....	....	1.44	....	0.21
Explaining	f.	33	12	1	1	2	1	....	50
	%	5.31	1.82	0.54	4.00	0.74	1.44	....	2.71
Persisting	f.	46	11	7	....	167	47	3	281
	%	7.40	1.67	3.78	....	62.54	68.11	20.00	15.28
Threatening	f.	10	2	1	....	....	1	....	14
	%	1.61	0.30	0.54	....	....	1.44	....	0.76
Refusing	f.	117	29	3	....	....	....	3	152
	%	18.84	4.41	1.62	....	....	....	20.00	8.26
Commanding	f.	61	3	9	....	....	....	....	73
	%	9.82	0.45	4.86	....	....	....	....	3.96
Pursuing	f.	21	2	....	....	....	....	....	23
	%	3.38	0.30	....	....	....	....	....	1.25
Physically Attacking	f.	60	....	14	....	1	....	....	75
	%	9.66	....	7.56	....	00.37	....	....	4.07
Other	f.	19	4	4	....	7	1	4	39
	%	3.05	0.60	2.16	....	2.62	1.44	26.66	2.12
Total		621	657	185	25	267	69	15	1,839
		100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.0

Table 6

Effects of Structure of the Program on Within-Subject Percentages of Broad Adaptations[a]

Broad Adaptation		Montessori School N=19	University Laboratory School N=18	F-Ratio
Unresponsive-Withdrawing	$\bar{X}$	24.32	32.00	7.20**
	SD	7.84	10.95	
Dependent-Compliant	$\bar{X}$	45.53	24.94	34.16**
	SD	11.08	13.38	
Thoughtful-Persistant	$\bar{X}$	15.58	25.39	7.77**
	SD	7.74	12.44	
Offensive-Combative	$\bar{X}$	13.21	15.67	0.55
	SD	8.50	11.49	

[a] DF = 1 and 54
* p <.05.
** p <.01.

Table 7

SIGNIFICANT EFFECTS OF AGE ON WITHIN-SUBJECT FREQUENCIES AND PERCENTAGES OF CONFLICT EFU[a]

Event		Young N=14 Freq.	Middle N=44 Freq.	Old N=14 Freq.	F-Ratio	Young N=14 %	Middle N=44 %	Old N=14 %	F-Ratio
Desire vs. Desire	$\bar{X}$	7.50	7.23	9.79	4.51*	31.93	30.77	39.36	2.15
	SD	4.65	4.03	4.74		17.41	14.50	12.97	
Desire vs. Teacher Expecta-tion	$\bar{X}$	7.93	8.23	9.50	12.89**	33.93	35.68	34.36	3.76*
	SD	5.69	5.85	2.96		17.65	17.64	8.71	
Desire vs. Inability	$\bar{X}$	4.64	3.32	3.21	2.48	19.86	16.57	12.29	3.19
	SD	2.82	2.13	1.25		10.11	13.42	4.94	
Total Events	$\bar{X}$	23.14	23.30	27.71	13.84*				
	SD	8.50	7.76	5.82					

[a]DF = 1 and 54
* p <.05.
** p <.01.

Table 8

Significant Effects of Age on Within-Subject Percentage of Adaptations and Broad Adaptations[a]

Adaptation		Young N=14	Middle N=44	Old N=14	F-Ratio
Unresponsive	$\bar{X}$	30.29	21.86	20.71	14.44**
	SD	8.11	9.28	8.33	
Refusing	$\bar{X}$	5.50	8.02	11.00	4.60*
	SD	3.39	6.43	7.93	
Verbal Adaptations	$\bar{X}$	17.03	20.20	22.75	7.38**
	SD	12.29	13.53	12.78	
Broad Adaptation					
Unresponsive-Withdrawing	$\bar{X}$	36.57	25.82	25.57	13.36**
	SD	8.20	9.58	9.48	
Offensive-Combative	$\bar{X}$	12.21	15.73	23.14	4.65*
	SD	9.33	10.03	10.74	

[a] DF = 1 and 54
* p <.05.
** p <.01.

Table 9

Significant Effects of Number of EFU Encountered on Within-Subject Percentages of EFU Experienced[a]

Event		Number of Events Encountered						
		7-15 N=12	16-20 N=12	21-25 N=12	25-29 N=12	29-32 N=12	32-41 N=12	F-Ratio
Desire vs. Teacher Expectation	$\bar{X}$	32.92	32.25	30.42	35.33	34.08	45.50	3.64*
	SD	15.87	19.46	15.25	15.18	11.38	17.27	
Desire vs. Inability	$\bar{X}$	19.25	25.67	14.00	14.25	13.92	11.17	7.91**
	SD	14.03	17.07	6.90	8.16	7.78	8.76	

[a] DF = 1 and 66
* p <.06.
** p <.01.

Table 10

Significant Effects of Number of EFU Encountered on Within-Subject Percentages of Adaptations and Broad Adaptations[a]

Adaptation		Number of Events Encountered						
		7-15 N=12	16-20 N=12	21-25 N=12	25-29 N=12	29-32 N=12	32-41 N=12	F-Ratio
Unresponsive	$\bar{X}$	27.42	25.33	25.00	24.50	20.25	17.17	9.30**
	SD	12.82	10.10	7.69	4.78	9.65	7.42	
Persisting	$\bar{X}$	20.17	20.08	15.92	14.83	14.25	12.33	5.52*
	SD	15.55	13.87	6.50	8.89	5.43	6.04	
Physically Attacking	$\bar{X}$	1.67	2.17	2.08	5.08	7.75	3.50	7.28**
	SD	3.03	4.57	3.38	4.46	6.20	4.30	
Broad Adaptation								
Unresponsive-Withdrawing	$\bar{X}$	32.08	30.17	28.92	28.17	25.25	22.58	6.81**
	SD	14.72	10.84	7.99	6.62	9.39	8.35	
Offensive-Combative	$\bar{X}$	9.67	11.92	17.33	17.75	23.43	18.83	11.56**
	SD	12.28	9.64	8.36	10.23	8.32	9.57	

[a] DF = 1 and 54
* $p < .05$.
** $p < .01$.

Table 11

Total Sample Intercorrelations Among Within-Subject Percentages of Fourteen Adaptations[a]
N=72

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Unresponsive	1.00													
2.	Withdrawing	-.08	1.00												
3.	Crying	.04	0.02	1.00											
4.	Complying	-.23	-.17	-.20	1.00										
5.	Seeking Assistance	.05	-.11	.12	-.22	1.00									
6.	Making Recompense	.07	-.03	.13	-.18	-.09	1.00								
7.	Questioning	-.08	-.18	-.08	.14	.10	-.04	1.00							
8.	Explaining	-.10	.04	.01	-.29	.14	.02	-.01	1.00						
9.	Persisting	-.18	.06	.06	-.40	-.02	-.01	-.03	-.03	1.00					
10.	Threatening	-.05	-.07	.04	-.04	.03	-.08	.11	.17	-.18	1.00				
11.	Refusing	-.36	.02	-.10	-.17	-.26	-.10	-.08	.07	-.02	-.20	1.00			
12.	Commanding	-.11	-.05	-.07	-.31	-.04	.42	-.10	.15	-.05	.08	.03	1.00		
13.	Pursuing	.04	.14	-.02	-.27	.07	.13	.04	-.06	-.15	.08	.09	.10	1.00	
14.	Physically Attacking	-.18	-.06	.12	-.13	.04	.05	-.07	-.08	-.31	.25	.07	.06	.11	1.00

[a] DF = 70
r = .23, p <.05.
r = .30, p <.01.

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